



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,464	11/15/2001	Adam Murano	2384.1001-011	6247

21005 7590 06/25/2003

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.  
530 VIRGINIA ROAD  
P.O. BOX 9133  
CONCORD, MA 01742-9133

EXAMINER

MAYES, MELVIN C

ART UNIT	PAPER NUMBER
----------	--------------

1734

3

DATE MAILED: 06/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/002,464

Applicant(s)

MURANO, ADAM

Examiner

Melvin Curtis Mayes

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-5, 8, 15, 16, 18, 20-23 and 26 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

- 6) ☒ Claim(s) 2-5, 8, 15, 16, 18, 20-23 and 26 is/are rejected.

- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

(1)

The indicated allowability of the claims are withdrawn in view of the newly discovered reference(s) to Wade 6,093,278 and Walters 5,256,846. Rejections based on the newly cited reference(s) follow.

### **CLAIM INTERPRETATION**

(2)

All of the claims claim “discontinuous layer including discrete islands of metal.” The specification does not give an express definition of “discrete islands of metal.” For purposes of examination, the claims are broadly interpreted to mean that the discontinuous layer includes metal that has individually distinct (“discrete”) portions that are isolated from each other (“islands”) regardless of the size of these individually distinct portions (“discrete islands”) of metal.

Claims 21 and 26 now claim “said discrete islands of metal are encapsulated by said thermoplastic layers.” The description of the embodiment of Figure 1 describes the discontinuous layer (of discrete islands of metal and adhesive) as “between” the thermoplastic layers as opposed to the another embodiment of Figure 2 wherein a continuous thermoplastic sheet “encapsulates” the discontinuous layer of metal and as shown, the thermoplastic encloses or surrounds the discrete islands of metal. Based on the specification, “encapsulated by said thermoplastic layers” is interpreted to mean that the discrete islands of metal are enclosed or surrounded by the layers, as opposed to the embodiment of Figure 1 wherein the discrete islands

of metal are “between” the thermoplastic layers but are not “encapsulated” (i.e. enclosed or surrounded) by the thermoplastic layers.

***Claim Rejections - 35 USC § 102***

(3)

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

(4)

Claims 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Walters 5,256,846.

Walters 5,256,846 discloses a method of making a microwavable barrier film comprising: depositing on a planar substrate a barrier coating of material such as a metal in a series of noncontiguous, discrete patterns such as discrete circles, stripes, triangles or any other pattern to allow portions of the microwave field to directly contact the substrate in the gaps between the discrete patterns; and sandwiching the pattern between the substrate and a second microwave transparent substrate. Walters discloses that the planar substrate can be a polymeric film and the substrate layers can be affixed to each other by utilizing heat-sealable, thermoplastic material insulative substrates that can be heat sealed together (col. 4, lines 12-68, col. 5, lines 24-58, col. 7, lines 18-54).

By bonding heat-sealable thermoplastic substrate layers together to sandwich a deposited metal coating provided in a series of noncontiguous, discrete patterns (and thus a “discontinuous layer including islands of metal” as claimed) by heat sealing, first and second thermoplastic

layers are inherently partially melted for bonding to become a continuous thermoplastic sheet, as claimed.

***Claim Rejections - 35 USC § 103***

(5)

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

(6)

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walters 5,256,846 in view of Scharr et al. 4,676,857

Walters 5,256,846 discloses a method of making a microwavable barrier film comprising: depositing on a planar substrate a barrier coating of material such as a metal in a series of noncontiguous, discrete patterns such as discrete circles, stripes, triangles or any other pattern to allow portions of the microwave field to directly contact the substrate in the gaps between the discrete patterns; and sandwiching the pattern between the substrate and a second microwave transparent substrate. Walters discloses that the planar substrate can be a polymeric film and the substrate layers can be affixed to each other by utilizing heat-sealable, thermoplastic material insulative substrates that can be heat sealed together (col. 4, lines 12-68, col. 5, lines 24-58, col. 7, lines 18-54). Walters discloses that any method for applying microwave reflective coatings can be used provided the method does not substantially damage the substrate upon which the coating is being deposited but does not specifically disclose applying the metal reflective coating by transfer from a substrate.

Art Unit: 1734

Scharr et al. teach that metallized pattern for microwave heating material can be applied in a pre-selected pattern by using a transfer process such as hot stamping with very thin metal leaf, which is a relatively inexpensive transfer process (col. 2, lines 28-41).

It would have been obvious to one of ordinary skill in the art to have modified the method of Walters for making a microwavable barrier film by applying the metal microwave reflective noncontiguous, discrete pattern coating to the heat-sealable thermoplastic substrate by a transfer process such as hot stamping with very thin metal leaf, as taught by Scharr et al., as a relatively inexpensive process that can be used to apply metallized pattern for microwave heating material in a pre-selected pattern.

By bonding heat-sealable thermoplastic substrate layers together to sandwich the transferred metal coating provided in a series of noncontiguous, discrete patterns (and thus a "discontinuous layer including islands of metal" as claimed), discrete islands of metal are encapsulated by thermoplastic layers, as claimed.

(7)

Claims 2-5, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wade 6,093,278.

Wade discloses a method of making a vehicle trim part comprising: depositing a metal on a sheet of polymeric material, such as vinyl polymer film, in a desired pattern; applying adhesive across the metallized polymeric material; laminating a sheet of formable substrate material, such as a thermoplastic elastomer, to the polymeric material to sandwich the metal pattern therebetween; forming the laminated sandwich into a shape by any suitable technique such as vacuum forming, pressure-assisted forming; and molding a backing material to the rear of the

Art Unit: 1734

part through injection or other types of molding, casting or the use of a foaming material as would be familiar to the artisan. Wade disclose that metallization in a desired pattern can be performed by any of a wide variety of methods including sputtering, vapor deposition, ion beam deposition or hot stamping of a metallized transfer sheet. Wade discloses that the metal pattern can be a wide variety of shapes including logos, lettering or other desirable graphic appearances (col. 3-7).

It would have been obvious to one of ordinary skill in the art to have deposited the metal on the sheet of polymeric material in a "discontinuous layer including discrete islands of metal" as Wade discloses that the metal pattern can be a wide variety of shapes including logos, lettering or other desirable graphic appearances. By depositing the metal pattern to form a logo or lettering, as disclosed, Wade suggests depositing the metal in a pattern which has portions which are individually distinct (discrete) and isolated from each other (islands).

(8)

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wade in view of Dunning et al. and Sulzbach et al. 3,996,461.

Wade discloses a method of making a vehicle trim part comprising: depositing a metal on a sheet of polymeric material, such as vinyl polymer film, in a desired pattern, applying adhesive across the metallized polymeric material; and laminating a sheet of formable substrate material, such as a thermoplastic elastomer, to the polymeric material to sandwich the metal pattern therebetween. Wade discloses that metallization in a desired pattern can be performed by any of a wide variety of methods including sputtering, vapor deposition, ion beam deposition or chemical vapor deposition and can be aluminum or other metal depending on the desired

Art Unit: 1734

appearance of the resulting mirror finish decorative portion. Wade discloses that the metal pattern can be a wide variety of shapes including logos, lettering or other desirable graphic appearances (col. 3-7). Wade does not disclose depositing indium metal by electron beam evaporation.

Dunning et al. teach that highly reflective metals used for trim parts of automobiles include not only aluminum but also indium (col. 2, lines 1-13).

Sulzbach et al. teach that standard thin film deposition techniques include thermal evaporation, electron beam bombardment, sputtering, chemical vapor deposition and induction heating (col. 3, lines 23-26).

It would have been obvious to one of ordinary skill in the art to have deposited the metal on the sheet of polymeric material in a "discontinuous layer including discrete islands of metal" as Wade discloses that the metal pattern can be a wide variety of shapes including logos, lettering or other desirable graphic appearances. By depositing the metal pattern to form a logo or lettering, as disclosed, Wade suggests depositing the metal in a pattern which has portions which are individually distinct (discrete) and isolated from each other (islands).

Further, it would have been obvious to one of ordinary skill in the art to have modified the method of Wade for making a vehicle trim part having mirror finish by depositing indium as the metal, as taught by Dunning, as highly reflective metal used for trim parts of automobiles. The use of indium as the reflective metal for making the trim part would have been obvious to one of ordinary skill in the art.

Depositing the indium by electron beam evaporation would have been obvious to one of ordinary skill in the art, as Wade discloses that metallization can be performed by any of a wide



variety of methods including sputtering, vapor deposition, ion beam deposition or chemical vapor deposition and Sulzbach et al. teach that standard thin film deposition techniques include thermal evaporation, electron beam bombardment, sputtering, chemical vapor deposition. The use of any of these deposition techniques would have been obvious to one of ordinary skill in the art.

(9)

Claims 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wade in view of Fromson.

Wade discloses a method of making a vehicle trim part comprising: depositing a metal on a sheet of polymeric material, such as vinyl polymer film, in a desired pattern; applying adhesive across the metallized polymeric material; and laminating a sheet of formable substrate material, such as a thermoplastic elastomer, to the sheet of polymeric material to sandwich the metal pattern therebetween. Wade discloses that the metal pattern can be a wide variety of shapes including logos, lettering or other desirable graphic appearances. Wade discloses that depending on the nature of the adhesive, the adhesive can be cured by application of pressure, by the application of heat and pressure or through other means of curing adhesive to prevent separation of the substrate material and polymeric material (col. 3-7).

Fromson teaches that adhesive that is used to make a metal coated structure such as automotive trim with excellent adhesion includes adhesive curable by actinic radiation such as ultraviolet light (col. 1-5).

It would have been obvious to one of ordinary skill in the art to have deposited the metal on the sheet of polymeric material in a “discontinuous layer including discrete islands of metal”

Art Unit: 1734

as Wade discloses that the metal pattern can be a wide variety of shapes including logos, lettering or other desirable graphic appearances. By depositing the metal pattern to form a logo or lettering, as disclosed, Wade suggests depositing the metal in a pattern which has portions which are individually distinct (discrete) and isolated from each other (islands).

Further, it would have been obvious to one of ordinary skill in the art to have modified the method of Wade for making a vehicle trim part by providing the adhesive as curable by ultraviolet light, as Wade discloses that depending on the nature of the adhesive, the adhesive can be cured by application of pressure, by the application of heat and pressure or through other means of curing adhesive, and Fromson teaches that an adhesive with excellent adhesion used to make automotive trim includes adhesive curable by actinic radiation such as ultraviolet light. The use of an ultraviolet curable adhesive would have been obvious to one of ordinary skill in the art for its excellent adhesion.

Providing the adhesive on the sheet of formable substrate material before laminating the sheet to the sheet polymeric material would have been obvious to one of ordinary skill in the art as an alternative to applying the adhesive directly to the sheet of polymeric material.

(10)

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wade 6,093,278 in view of Moran 4,397,896.

Wade discloses a method of making a vehicle trim part comprising: depositing a metal on a sheet of polymeric material, such as vinyl polymer film, in a desired pattern; applying adhesive across the metallized polymeric material; laminating a sheet of formable substrate material, such as a thermoplastic elastomer, to the polymeric material to sandwich the metal pattern

Art Unit: 1734

therebetween; forming the laminated sandwich into a shape by any suitable technique such as vacuum forming, pressure-assisted forming; and molding a backing material to the rear of the part through injection or other types of molding, casting or the use of a foaming material as would be familiar to the artisan. Wade discloses that the metal pattern can be a wide variety of shapes including logos, lettering or other desirable graphic appearances (col. 3-7).

Moran teaches that decorative trim for vehicles are covered or embossed or a combination thereof so as to give a particular decorative appearance and surface contour (col. 1, lines 21-31).

It would have been obvious to one of ordinary skill in the art to have deposited the metal on the sheet of polymeric material in a "discontinuous layer including discrete islands of metal" as Wade discloses that the metal pattern can be a wide variety of shapes including logos, lettering or other desirable graphic appearances. By depositing the metal pattern to form a logo or lettering, as disclosed, Wade suggests depositing the metal in a pattern which has portions which are individually distinct (discrete) and isolated from each other (islands).

Further, it would have been obvious to one of ordinary skill in the art to have modified the method of Wade for making a vehicle trim part by embossing the trim part, as taught by Moran, to give the trim a particular surface contour. Embossing in addition to the metal pattern would have been obvious to one of ordinary skill in the art to give the trim part a particular surface contour in addition to its decorative appearance, as suggested by Moran.

Art Unit: 1734

***Allowable Subject Matter***

(11)

Claim 26 is allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not disclose or suggest the further steps of depositing a metal onto a metallized composite to form a second discontinuous layer of metal and laminating a third thermoplastic layer onto the second discontinuous layer, after making the metallized composite by depositing a discontinuous layer including discrete islands of metal on a first thermoplastic layer and laminating a second thermoplastic layer onto the discontinuous layer to encapsulate (enclose or surround) the discrete islands of metal by the thermoplastic layers.

***Conclusion***

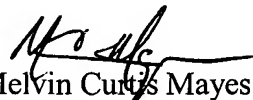
(12)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvin Curtis Mayes whose telephone number is 703-308-1977. The examiner can normally be reached on Mon-Fri 7:00 AM - 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 703-308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Art Unit: 1734

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

  
Melvin Curtis Mayes  
Primary Examiner  
Art Unit 1734

MCM  
June 21, 2003